REMARKS

The examiner has rejected the claims under 35 USC §103 over the article to Newman, in light of Rothstein (US4163681) and/or Svensson (US4638065). The examiner asserts that it would have been obvious to one skilled in the art to manufacture a bimodal explosive composition with the novel particle sizes as claimed, "so as to control such characteristics as burn rate by controlling surface area of the fuel/oxidizer". The applicant respectfully traverses this assertion as discussed below.

In the first instance, the examiner's reference to control of burn rate by controlling surface area of fuel and oxidizer is irrelevant to the present invention. The burn rate of gun- and rocket-propellants can be controlled in this way, but the present invention concerns a high explosive without any fuel and oxidiser present. As noted in the specification, the present invention discloses a pressable explosive composition with improved pressability. In particular, the claimed composition surprisingly exhibits pressability greater than 99% TMD (theoretical maximum density) at relatively low pressure. This is an exceptionally significant improvement in pressability compared with the prior art. The reference to Newman in fact teaches against the results of the present invention, claiming that is difficult to nearly impossible to press PBXW-17 above 99% TMD, and that high pressure even over 1520 bar does not noticeably increase the density. According to Newman, this difficulty is a result of the properties of the *binder*. Despite this prejudice in the art, the claimed composition achieves the results that the primary reference argues is difficult or impossible to achieve by making novel composition with the claimed *particle sizes*.

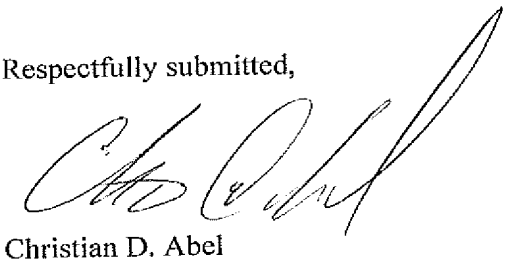
The secondary and tertiary reference cited by the examiner do not overcome this prejudice, or suggest to one skilled in the art that a pressability over 99% TMD is possible. (It should be noted that the increase in pressability from 98% to over 99% is very significant in the current context). The reference to Rothstein involves a completely different technology in the explosive art. Rothstein involves cast-cured explosives (not pressable explosives) based upon two-component compositions comprising thermosetting resins. This type of explosive requires special and expensive high-shear mixing devices, and because of the explosives' high viscosity is limited to compositions with only 75-81 % explosive. In contrast, the present application

involves pressable explosives with an explosive composition of over 90%. Thus it would have been unnatural for one skilled in the art to look to the teaching of Rothstein in order to modify Newman in order to increase the degree of pressability. Nothing in either Newman or Rothstein or the general knowledge or experience of one skilled in the art would suggest that the particle sizes from Rothstein could be utilized to overcome what Newman asserts to be a theoretical limit to pressability based upon the characteristics of the binder. Even in light of the recent Supreme Court decision in KSR, the examiner must identify some basis for one skilled in the art to make the asserted modification with an expectation of success. Newman in fact teaches one skilled in the art to expect failure rather than success, and it is respectfully believed therefore that the examiner has not established a primae facie case of obviousness.

The same applies to the reference to Svensson. Svensson essentially discloses a solvent for the crystallization of RDX or HMX, and as such teaches nothing regarding pressability. In particular, there is no disclosure in Svensson that would suggest to one skilled in the art that the prejudice in Newman against a pressability over 99% TMD could be achieved with the claimed particle sizes, when Newman argues that it is the properties of the binder itself that is the limiting factor.

Based upon the foregoing, favourable reconsideration is solicited.

Respectfully submitted,



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